

# SEQUENCE LISTING

<110> Sanders, Bob G.  
Kline, Kimberly  
Yu, Weiping  
Liu, Hui  
Hantash, Feras

<120> Tocopherol Associated Protein and Uses Thereof

<130> D6453CIP

<141> 2003-10-29  
<150> US 10/419,629  
<151> 2003-04-21

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cgggagtggt	agctgcttct	gcaagagtgt	gcccaccaga	ccacaaagtt	350
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 Ser Gly Ser Met Trp Ser Ser Glu Ser Lys Arg Thr Leu Thr Thr  
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 Ser Leu Ala Trp Gln Pro Pro Glu Val Ile Gln Gln Tyr Leu Ser  
                   50                  55                  60  
 Gly Gly Met Cys Gly Tyr Asp Leu Asp Gly Cys Pro Val Trp Tyr  
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 Asp Ile Ile Gly Pro Lys Asp Ala Lys Gly Leu Leu Phe Ser Ala  
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 Ser Lys Gln Asp Leu Leu Arg Thr Lys Met Arg Glu Cys Glu Leu  
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 Leu Leu Gln Glu Cys Ala His Gln Thr Thr Lys Leu Gly Arg Lys  
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 Val Glu Thr Ile Thr Ile Ile Tyr Asp Cys Glu Gly Leu Gly Leu  
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 Cys Met Phe Glu Glu Asn Tyr Pro Glu Thr Leu Lys Arg Leu Phe  
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 Val Val Lys Ala Pro Lys Leu Phe Pro Val Ala Tyr Asn Leu Ile  
                  170                 175                 180  
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                  185                 190                 195  
 Gly Ala Asn Tyr Lys Glu Val Leu Leu Lys His Ile Ser Pro Asp  
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 Gln Val Pro Val Glu Tyr Gly Gly Thr Met Thr Asp Pro Asp Gly  
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 Asn Pro Lys Cys Lys Ser Lys Ile Asn Tyr Gly Gly Asp Ile Pro  
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 Arg Lys Tyr Tyr Val Arg Asp Gln Val Lys Gln Gln Tyr Glu His  
                  245                 250                 255  
 Ser Val Gln Ile Ser Arg Gly Ser Ser His Gln Val Glu Tyr Glu  
                  260                 265                 270  
 Ile Leu Phe Pro Gly Cys Val Leu Arg Trp Gln Phe Met Ser Asp  
                  275                 280                 285  
 Gly Ala Asp Val Gly Phe Gly Ile Phe Leu Lys Thr Lys Met Gly  
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 Glu Arg Gln Arg Ala Gly Glu Met Thr Glu Val Leu Pro Asn Gln  
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 Arg Tyr Asn Ser His Leu Val Pro Glu Asp Gly Thr Leu Thr Cys

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Ser Asp Pro Gly	Ile Tyr Val Leu Arg	Phe Asp Asn Thr Tyr	Ser		
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Phe Ile His Ala	Lys Lys Val Asn Phe	Thr Val Glu Val Leu	Leu		
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cattgacaac	atcattagct	ggcagcctcc	agaggtgatc	caacagtatc	250
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ctgaggacca	agatgctgga	tgccaagggt	ctgctgttct	cagcctccaa	350
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agtgtgcccc	ccagaccaca	aagttgggga	ggaaggtgga	gaccatcacc	450
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tgtggaggcc	tatggagagt	ttctctgcat	gtttgaggaa	aattatcccg	550
aaacactgaa	gcgtcttttt	gttggttaaag	cccccaaact	gtttcctgtg	600
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ctgaccaggt	gcctgtggag	tatgggggcg	ccatgactga	ccctgatgga	750
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cacctacagc	ttcattcatg	ccaagaagg	caatttcact	gtggaggtcc	1150
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Pro Asn Pro Asp Asp Tyr Phe Leu Leu Arg Trp Leu Arg Ala Arg	35 40 45	
Ser Phe Asp Leu Gln Lys Ser Glu Ala Met Leu Arg Lys His Val	50 55 60	
Glu Phe Arg Lys Gln Lys Asp Ile Asp Asn Ile Ile Ser Trp Gln	65 70 75	
Pro Pro Glu Val Ile Gln Gln Tyr Leu Ser Gly Gly Met Cys Gly	80 85 90	
Tyr Asp Leu Asp Gly Cys Pro Val Trp Tyr Asp Ile Ile Gly Pro	95 100 105	
Leu Asp Ala Lys Gly Leu Leu Phe Ser Ala Ser Lys Gln Asp Leu	110 115 120	
Leu Arg Thr Lys Met Arg Glu Cys Glu Leu Leu Leu Gln Glu Cys	125 130 135	
Ala His Gln Thr Thr Lys Leu Gly Arg Lys Val Glu Thr Ile Thr	140 145 150	
Ile Ile Tyr Asp Cys Glu Gly Leu Gly Leu Lys His Leu Trp Lys	155 160 165	
Pro Ala Val Glu Ala Tyr Gly Glu Phe Leu Cys Met Phe Glu Glu	170 175 180	
Asn Tyr Pro Glu Thr Leu Lys Arg Leu Phe Val Val Lys Ala Pro	185 190 195	
Lys Leu Phe Pro Val Ala Tyr Asn Leu Ile Lys Pro Phe Leu Ser	200 205 210	
Glu Asp Thr Arg Lys Lys Ile Met Val Leu Gly Ala Asn Trp Lys	215 220 225	
Glu Val Leu Leu Lys His Ile Ser Pro Asp Gln Val Pro Val Glu	230 235 240	
Tyr Gly Gly Thr Met Thr Asp Pro Asp Gly Asn Pro Lys Cys Lys	245 250 255	
Ser Lys Ile Asn Tyr Gly Gly Asp Ile Pro Arg Lys Tyr Tyr Val	260 265 270	
Arg Asp Gln Val Lys Gln Gln Tyr Glu His Ser Val Gln Ile Ser	275 280 285	
Arg Gly Ser Ser His Gln Val Glu Tyr Glu Ile Leu Phe Pro Gly	290 295 300	
Cys Val Leu Arg Trp Gln Phe Met Ser Asp Gly Ala Asp Val Gly	305 310 315	
Phe Gly Ile Phe Leu Lys Thr Lys Met Gly Glu Arg Gln Arg Ala	320 325 330	
Gly Glu Met Thr Glu Val Leu Pro Asn Gln Arg Tyr Asn Ser His	335 340 345	
Leu Val Pro Glu Asp Gly Thr Leu Thr Cys Ser Asp Pro Gly Ile	350 355 360	
Tyr Val Leu Arg Phe Asp Asn Thr Tyr Ser Phe Ile His Ala Lys		

Lys Val Asn Phe	365	370	375
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 <212> PRT  
 <213> *Homo sapiens*  
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 <221> PEPTIDE  
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 to keyhole limpet hemocyanin

<400> 8



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 <223> antisense primer for the TAP deletion mutants

<400> 13  
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 <213> *Homo sapiens*  
  
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 ggaaggtgga gaccatcacc ataatttatg actgcgaggg gcttggcctc 150  
 aagcatctct ggaagcctgc tgtggaggcc tatggagagt ttctctgcat 200  
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Glu Gly Leu Gly Leu Lys His Leu Trp Lys Pro Ala Val Glu Ala	50	55
Tyr Gly Glu Phe Leu Cys Met Phe Glu Glu Asn Tyr Pro Glu Thr	65	70
Leu Lys Arg Leu Phe Val Val Lys Ala Pro Lys Leu Phe Pro Val	80	85
Ala Tyr Asn Leu Ile Lys Pro Phe Leu Ser Glu Asp Thr Arg Lys	95	100
Lys Ile Met Val Leu Gly Ala Asn Trp Lys Glu Val Leu Leu Lys	110	115
His Ile Ser Pro Asp Gln Val Pro Val Glu Tyr Gly Gly Thr Met	125	130
Thr Asp Pro Asp Gly Asn Pro Lys Cys Lys Ser Lys Ile Asn Tyr	140	145
Gly Gly Asp Ile Pro Arg Lys Tyr Tyr Val Arg Asp Gln Val Lys	155	160
Gln Gln Tyr Glu His Ser Val Gln Ile Ser Arg Gly Ser Ser His	170	175
Gln Val Glu Tyr Glu Ile Leu Phe Pro Gly Cys Val Leu Arg Trp	185	190
Gln Phe Met Ser Asp Gly Ala Asp Val Gly Phe Gly Ile Phe Leu	200	205
Lys Thr Lys Met Gly Glu Arg Gln Arg Ala Gly Glu Met Thr Glu	215	220
Val Leu Pro Asn Gln Arg Tyr Asn Ser His Leu Val Pro Glu Asp	230	235
Gly Thr Leu Thr Cys Ser Asp Pro Gly Ile Tyr Val Leu Arg Phe	245	250
Asp Asn Thr Tyr Ser Phe Ile His Ala Lys Lys Val Asn Phe Thr	260	265
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Gln Leu Gly Ala Gly Thr Pro Lys	290	293

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 <223> deletion mutant TAP-681



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<400> 17

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Phe Leu Ser Glu Asp Thr Arg Lys Lys Ile Met Val Leu Gly Ala
      35      40      45
Asn Trp Lys Glu Val Leu Leu Lys His Ile Ser Pro Asp Gln Val
      50      55      60
Pro Val Glu Tyr Gly Gly Thr Met Thr Asp Pro Asp Gly Asn Pro
      65      70      75
Lys Cys Lys Ser Lys Ile Asn Tyr Gly Gly Asp Ile Pro Arg Lys
      80      85      90
Tyr Tyr Val Arg Asp Gln Val Lys Gln Gln Tyr Glu His Ser Val
      95     100     105
Gln Ile Ser Arg Gly Ser Ser His Gln Val Glu Tyr Glu Ile Leu
     110     115     120
Phe Pro Gly Cys Val Leu Arg Trp Gln Phe Met Ser Asp Gly Ala
     125     130     135
Asp Val Gly Phe Gly Ile Phe Leu Lys Thr Lys Met Gly Glu Arg
     140     145     150
Gln Arg Ala Gly Glu Met Thr Glu Val Leu Pro Asn Gln Arg Tyr
     155     160     165
Asn Ser His Leu Val Pro Glu Asp Gly Thr Leu Thr Cys Ser Asp
     170     175     180
Pro Gly Ile Tyr Val Leu Arg Phe Asp Asn Thr Tyr Ser Phe Ile
     185     190     195
His Ala Lys Lys Val Asn Phe Thr Val Glu Val Leu Leu Pro Asp

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Lys	Ala	Ser	Glu	Glu	Lys	Met	Lys	Gln	Leu	Gly	Ala	Gly	Thr	Pro
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				215					220					225
Lys														
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 <223> deletion mutant TAP-456

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 35 40 45  
 Phe Pro Gly Cys Val Leu Arg Trp Gln Phe Met Ser Asp Gly Ala  
 50 55 60  
 Asp Val Gly Phe Gly Ile Phe Leu Lys Thr Lys Met Gly Glu Arg  
 65 70 75  
 Gln Arg Ala Gly Glu Met Thr Glu Val Leu Pro Asn Gln Arg Tyr  
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 Asn Ser His Leu Val Pro Glu Asp Gly Thr Leu Thr Cys Ser Asp  
 95 100 105  
 Pro Gly Ile Tyr Val Leu Arg Phe Asp Asn Thr Tyr Ser Phe Ile  
 110 115 120

His	Ala	Lys	Lys	Val	Asn	Phe	Thr	Val	Glu	Val	Leu	Leu	Pro	Asp
				125					130					135
Lys	Ala	Ser	Glu	Glu	Lys	Met	Lys	Gln	Leu	Gly	Ala	Gly	Thr	Pro
				140					145					150
Lys														
151														